WE CLAIM:

1. An isolated nucleic acid molecule comprising any of SEQ 5 NOs: 1, 4-5, 7, 9, 11 or 13, or a fragment thereof.

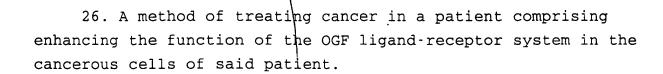
- 2. An isolated nucleic acid molecule substantially homologous to any of SEQ ID NOs: 1, 4-5, 7, 9, 11 or 13.
- 3. An isolated nucleic acid molecule, the complement sequence of which hybridize under stringent conditions to any of SEQ ID NOs: 1, 4-5 7, 9, 11 and 13.
 - 4. An isolated nucleic acid molecule comprising an antisense sequence of any of SEQ ID NOs: 1, 4-5, 7, 9, 11 and 13.
 - 5. An expression vector comprising any of the isolated nucleic acid molecules of claims 1-4.
- 20 6. A cell, transformed with the expression vector of claim 5.
- 7. A method of producing an OGFr protein or a fragment thereof, comprising transforming a host cell with an expression vector, wherein said expression vector encodes said OGFr protein or a fragment thereof, expressing said OGFr protein or said fragment thereof in the cell and recovering said protein or said fragment thereof.
- 30 8. The method of claim 7 wherein said OGFr is encoded by any of SEQ ID NOs: 1, 4-5, 7, 9, 11 or 13.

- 9. An isolated protein consisting any of SEQ ID NOs: 2, 6, 8, 10, 12 and 14.
- 10. The isolated protein of claim 9, wherein said protein is 5 made recombinantly.
 - 11. A functional derivative of any of SEQ ID NO: 2, 6, 8, 10, 12 and 14.
- 10 12. An antibody directed against an OGFr protein consisting of any of SEQ ID NOs: 2, 6 8 10, 12 and 14.
 - 13. The antibody of claim 10, wherein said antibody is a monoclonal antibody.
- 14. A pharmaceutical composition comprising the isolated nucleic acid molecule of claim 1 and a pharmaceutically acceptable carnier.
- 20 15. A pharmaceutical composition comprising the isolated nucleic acid molecule of claim 4 and a pharmaceutically acceptable carrier.
- 16. A pharmaceutical composition comprising the expression vector of claim 5 and a pharmaceutically acceptable carrier.
 - 17. A pharmaceutical composition comprising the cell of claim 6 and a pharmaceutically acceptable carrier.
- 30 18. A pharmaceutical composition comprising the isolated protein of claim 9 and a pharmaceutically acceptable carrier.

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- 19. A pharmaceutical composition comprising the functional derivative of claim 11 and a pharmaceutically acceptable carrier.
- 20. A pharmaceutical composition comprising the antibody of claim 12 and a pharmaceutically acceptable carrier.
 - 21. A method of detecting the expression of an OGF receptor in a tissue of a subject, comprising contacting a sample of said tissue with a nucleic acid sequence encoding said OGFr or a portion thereof and determining the level of the mRNA encoding said OGFr.
 - 22. A method of detecting the level of an OGF receptor in a tissue of a subject, comprising contacting a sample of said tissue with an antibody specific for said OGFr, detecting and quantitating the complexes formed between said OGFr and said antibody.
- 23. A method of inhibiting growth of cells in vitro
 20 comprising introducing to said cells an effective amount of nucleic acid molecules coding for an OGFr or a functional derivative thereof.
- 24. A method of promoting growth of cells *in vitro*25 comprising introducing to said cells an effective amount of an OGFr antisense molecule.
- 25. A method of promoting growth of cells in vitro comprising introducing to said cells an effective amount of an antibody directed against an OGFr expressed in such cells.

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- 27. A method of treating cancer in a patient comprising administering to said patient, an effective amount of a nucleic acid molecule coding for an OGFr or a functional derivative thereof.
- 10 28. The method of claim 27, wherein said cancer is selected from the group consisting of a cancer of neural tissues, prostate cancer, breast cancer, head and neck cancer, and gastrointestinal cancer.
- 29. The method of claim 28, wherein said gastrointestinal cancer is selected from the group consisting of a pharyngeal, esophageal, stomach, small and large intestine, liver, rectal, colon, pancreatic, biliary tract cancer.
- 20 30. The method of claim 27, wherein said cancer is characterized by a deficiency of OGF receptors.
 - 31. The method of claim 27, further comprising administering OGF to said subject.
 - 32. A method of treating a subject with a cancer characterized by a deficiency of OGF receptors, comprising determining the deficiency of OGF receptors on the cancerous cells in said subject, and administering to the subject an effective amount of a nucleic acid molecule coding for an OGFr or a functional derivative thereof.



- 33. The method of claim \33, further comprising administering OGF to said subject.
- 34. A method of promoting growth of cells in a subject in need thereof comprising interfering with the function of the OGF ligand-receptor system in said subject.
 - 35. The method of claim/34, wherein said subject suffers a tissue wound.
 - 36. The method of claim 34, comprising administering to said subject, an effective amount of an OGFr antisense molecule.
 - 37. The method of claim 34, comprising administering to said subject, an effective amount of an antibody against an OGFr.

15 said subject,